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EXAMINER
EL-ZOOBI, MARIA

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-28* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *1-28* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on *27 February 2004* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some * c) ☐ None of:
        1. ☐ Certified copies of the priority documents have been received.
        2. ☐ Certified copies of the priority documents have been received in Application No. _____.
        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)
1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *11/15/2007, 06/16/2004, and 02/27/2004.*
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claims 1-3, 5-16 and 19- 24 are rejected under 35 U.S.C. 102(e) as being

unpatentable by Goodman US (7,173,910)

Regarding claim 1, Goodman discloses, a system for measuring quality of

a digital network (Fig. 2, el. 30) comprising:

a controller (the processor in the Probes; Goodman does not expressly disclose

the processor, but it is inherent for the TP to have a processor in order to perform the

mentioned functions i.e., run the software algorithm to test the voice quality; Pg. 3, lines

32-40 and Pg. 5, lines 34-36)

a test dialer (Fig. 2, el. 14f)

a network component (Fig. 2, el. 36) remote from said test dialer and said

controller (Pg. 7, lines 12-22)

said network component being in communication with said controller and said

test dialer over the digital network (Fig. 2, el. 12)

a testing function resident on said network component (Fig. 5, el. 82 and Pg. 9, lines 45-48)

said controller controlling said test dialer and said testing function to determine at least one quality (Pg. 10, lines 1-11) selected from the group consisting of a voice quality (Pg. 2, lines 16-20 and 42-47), a call completion quality, a load capability quality, and any combinations thereof.

Regarding claim 2, Goodman discloses, said network component is selected from the group consisting of a multimedia terminal adapter (Fig. 5, el. 74 and Pg. 9, lines 38-44), a fiber node, an amplifier, a tap, and any combinations thereof.

Regarding claim 3, Goodman discloses, said network component is a multimedia terminal adapter positioned at a point-of-service (Fig. 2, el. 74 and Pg. 9, lines 38-44)
.

Regarding claim 5, Goodman discloses, said multimedia terminal adapter is an embedded adapter or a stand-alone adapter (Pg. 9, lines 39-44).

Regarding claim 6, Goodman discloses, said testing function is configured to receive a call set up signal from said test dialer (Pg. 10, lines 6-13).

Regarding claim 7, Goodman said testing function is configured to receive an audio signal from said test dialer (Pg. 3, lines 33-34)

send a test packet (Pg. 6, lines 10-14) representative of said audio signal to said controller (Pg. 10, lines 10-11; the playback of the store references file)

said controller being configured to calculate said at least one quality based at least in part on a comparison of said test packet to a reference file (Pg. 10, lines 8-10)

Regarding claim 8, Goodman discloses, said reference file is resident on said controller and/or on said network component (Fig. 5, el. 76b and Pg. 9, lines 28-30).

Regarding claim 9, Goodman discloses, said network component receives said reference file from said test dialer (Pg. 3, lines 52-53).

Regarding claim 10, Goodman discloses, testing function is configured to receive a test packet from said test dialer (the generated test call; Pg. 10, lines 6-7)

convert said test packet into a test audio signal (Pg. 9, lines 45-49; the voice file) and

send said test audio signal to said controller (Playing back the voice file; Pg. 9, lines 46 and Pg. 10, line 10), so that said controller can calculate said at least one quality based in part on a comparison of said test audio signal to a reference file (Pg. 3, lines 64-67, Pg. 4, lines 1-6 and Pg. 10, lines 6-11)

Regarding claim 11, Goodman discloses, said at least one quality comprises a voice quality selected from the group consisting of a Mean Opinion Score (MOS), a Perceptual Analysis / Measurement System PAMS (Pg. 3, lines 35-36), a Perceptual Speech Quality Measurement PSQM (Pg. 3, lines 37-38), a Perceptual Evaluation of

Speech Quality (PESQ) and any combinations thereof.

Regarding claim 12, Goodman discloses, a system for measuring quality on a

digital network (Fig. 2, el. 30) comprising:

a controller (the processor in the Probes; Goodman does not expressly disclose

the processor, but it is inherent for the TP to have a processor in order to perform the

mentioned functions i.e., run the software algorithm to test the voice quality; Pg. 3, lines

32-40 and Pg. 5, lines 34-36)

a multimedia terminal adapter positioned at a point-of-service (Fig. 1, el. 14b)

a testing function resident on said multimedia terminal adapter (Pg. 3, lines 34-

36; PAMS)

a test dialer (the test probes dial a phone number for the purpose of testing; Pg.

3, lines 57-59 and Fig. 1, el. 14a)

said controller, said multimedia terminal adapter, and said test dialer being in

communication over the digital network (Fig. 2, el. 12) so that said testing function can

receive one or more non-invasive test signals from said test dialer (Pg. 3, lines 52-66;

regarding non-invasive signal, Goodman reference meet this limitation because the test

signal does not cause any harm to the human being).

Regarding claim 13, Goodman discloses, said one or more non-invasive test

signals comprises at least one signal selected from the group consisting of a call set up

signal, an audio signal (Pg. 3, lines 33-34), a test audio signal, a load test signal, and

any combinations thereof.

Regarding claim 14, Goodman discloses, said non-invasive test signal is an audio signal (Pg. 3, lines 33-34) said testing function converting said audio signal into a test packet (Pg. 6, lines 12-14; the test probes operate over IP network in which packets are transmitted and received between nodes) and sending said test packet to said controller (Pg. 3, lines 62-64)

Regarding claim 15, Goodman discloses, said controller measures a voice quality based in part on a comparison of said test packet to a reference file (Pg. 3, lines 64-67, Pg. 4, lines 1-6)

Regarding claim 16, Goodman discloses, said reference file is resident on said controller or on said multimedia terminal adapter (Fig. 1, el. 22b).

Regarding claim 19, Goodman discloses, said non-invasive test signal is a call set up signal (Pg. 3, lines 57-58)

Regarding claim 20, Goodman discloses, said non-invasive test signal is a test audio signal (Pg. 3, lines 33-34), said testing function receiving a test packet (Pg. 3, lines 57-65 and Pg. 6, lines 10-14; the test probes 14b that operate in IP network will receive a test packet that has an audio test signal in the payload of the packet) having said test audio signal (Pg. 6, lines 25-29)

retrieving said test audio signal from said test packet (in accordance to TCP/IP process, in order to processes a packet, the test probes has to retrieve the signal from

the payload, then change the header to include the new destination address)

and sending said test audio signal to said controller (Pg. 3, line 67 and Pg. 4,

lines 1-5; the test audio will go t the processor which will run a PAMS algorithm)

Regarding claim 21, Goodman discloses, said controller measures a voice

quality based in part on a comparison of said test audio signal to a reference file (Pg.

3, line 67 and Pg. 4, lines 1-5).

Regarding claim 22, Goodman discloses, a method for measuring quality on a

digital network, comprising:

sending an audio signal (Pg. 3, lines 33—34) across the digital network (Fig. 2,

el. 12) to point-of-service equipment (Fig. 5, el. 76) having a testing function resident

thereon (Fig. 5, el. 82)

generating a test packet at said point-of-service equipment (Pg. 9, lines 46-49),

said test packet being representative of said audio signal as received at said point-of-

service equipment (Pg. 9, lines 46-49 and Pg. 10, lines 9-10)

calculating a voice quality based at least in part on a comparison of said test

packet to a reference file, said voice quality being calculated at a location other than

said point-of-service equipment.

Regarding claim 23, Goodman discloses, said comparison is performed at either

said point-of-service equipment or at said location (Pg. 3, line 67 and Pg. 4, lines 1-4).

Regarding claim 24, Goodman discloses, said test audio signal is non-invasive

to said point-of-service equipment (Goodman reference meet this limitation because the

test signal does not cause any harm to the human being).

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all
obviousness rejections set forth in this Office action: (a) A patent may not be obtained though
the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences
between the subject matter sought to be patented and the prior art are such that the subject matter as a
whole would have been obvious at the time the invention was made to a person having ordinary skill in the art
to which said subject matter pertains. Patentability shall not be negatived by the manner in which the
invention was made.

4.   Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Goodman US (7,173,910).

Regarding claim 4, Goodman discloses, said testing function is configured to

determine said at least one quality (Pg. 9, lines 45-47).

Goodman does not disclose, without outputting an output signal at said point-of-

service.

Official notice is taken that it is well known in the art, that during testing of the

remote devices (in user location), the test signal is not noticed by the user at the remote

location for the purpose of not disturbing the customer during the testing period.

Therefore, it would have been obvious to one with ordinary skills in the art, at the time

the invention was made to modify Goodman system so it will not have an output signal

(i.e., testing signal as audio/tone) at the customer location so not to disturb the
customer.

5.   Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over
Goodman US (7,173,910) in view of Demakakos US (6,891,851)

Regarding claim 17, Goodman discloses, said multimedia terminal adaptor
receiving said non-invasive test signal

Goodman does not disclose first channel for receiving the said non-invasive test
signal.

Demakakos discloses, using an out-of-band channel for send/receive a testing
Signal (Pg. 4, lines 29-43)
Therefore, it would have been obvious to one with ordinary skill in the art, at the time the
invention was made to modify Goodman system to have the testing signal being on a
separate channel, as suggested by Dimakakos, in order to avoid interruption.

Regarding claim 18, Goodman in view of Dimakakos discloses, said multimedia
terminal adapter has a separate channel for sending and/or receiving a normal signal
while said first channel is in use (Dimakakos: Pg. 4, lines 29-43)

6.   Claims 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over
Goodman US (7,173,910) in view of Doane US (200/0138226).

Regarding claim 25, Goodman discloses, a method for testing a digital network comprising:

controlling a plurality of points-of-service (Fig. 2, el. 14a-14f) in the digital network to send a test signal (Pg. 7, lines 13-22) across the digital network (Fig. 2, el. 12) to a central controller (Fig. 2, el.44) at a location remote from said plurality of points-of-service (Pg. 7, lines 12-22 and Pg. 9, lines 8-13).

Goodman does not disclose that the testing is for the load capacity of the network and that the signal is a load testing signal.

Doane discloses, testing the capacity of the network (Paragraph. 0042).

Therefore, it would have been obvious to one with ordinary skill in the art, at the time the invention was made, to modify Goodman method to include the testing of the network capacity, as teaches by Doane, in order to have load balancing in the network for providing reliable means of fairly sharing network resources.

Regarding claim 26, Goodman in view of Doane, discloses, said plurality of points-of-service are controlled to send said load test signal simultaneously with one another or within a predetermined period of one another (Goodman: Pg. 7, lines 12-22 and Pg. 9, lines. 8-13)

Regarding claim 27, Goodman discloses, a method for testing a digital network (Pg. 3, lines 1-5), comprising:

controlling a central controller (Fig. 2, el. 44) to send a test signal (Pg. 7,

lines 13-22) across the digital network (Fig. 2, el. 12) to each of plurality of points-of-service in the digital network (Fig. 2, el. 14a-14f)

said central controller being remote from each of said plurality of points-of-service (Pg. 9, lines 8-13 and Pg. 7, lines 13-22).

Goodman does not disclose that the testing is for the load capacity of the network and that the signal is a load testing signal.

Doane discloses, testing the capacity of the network (Paragraph. 0042).

Therefore, it would have been obvious to one with ordinary skill in the art, at the time the invention was made, to modify Goodman method to include the testing of the network capacity, as teaches by Doane, in order to have load balancing in the network for providing reliable means of fairly sharing network resources.

Regarding claim 28, Goodman in view of Doane discloses, said controller sends said load test signal to each of said plurality of points-of-service simultaneously with one another or within a predetermined period of one another (Goodman: Pg. 7, lines 12-22 and Pg. 9, lines. 8-13).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARIA EL-ZOOBI whose telephone number is (571)270-3434. The examiner can normally be reached on Monday-Friday (8AM-5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Hai Tran can be reached on 571-272-7305. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. E./
Examiner, Art Unit 4178
/Maria El zoobi/
Examiner, Art Unit 4178

/Hai Tran/
Supervisory Patent Examiner, Art Unit 4178